PRESCRIBED BURNING

(Acre)
Code 338

Natural Resources Conservation Service
Conservation Practice Standard

I. Definition

Applying controlled fire to a predetermined area.

II. Purposes

This practice may be applied as part of a conservation management system to support one or more of the following:

- To control undesirable vegetation.
- To prepare sites for harvesting, planting or seeding.
- To control plant disease.
- To reduce wildfire hazards.
- To improve wildlife habitat.
- To improve plant production quantity and/or quality.
- To remove slash and debris.
- To enhance seed and seedling production.
- To facilitate distribution of grazing and browsing animals.
- To restore and maintain ecological sites.

III. Conditions Where Practice Applies

On forestland, native pasture, pastureland, wildlife land, hayland, and other lands as appropriate.

IV. Federal, State, and Local Laws

Users of this standard shall comply with applicable federal, state and local laws, rules, regulations, or permit requirements governing prescribed burning. This standard does not contain the text of federal, state, or local laws.

V. Criteria

The following criteria are applicable to all purposes.

The procedure, equipment, and the number of trained personnel shall be adequate to accomplish the intended purposes as stated in the burn plan.

The expected weather conditions, human and vehicular traffic that may be impeded by heat or smoke, liability (e.g., utility lines) and safety and health precautions shall be integrated into the timing, location and expected intensity of the burn.

Timing of burning will be commensurate with soil and site conditions to maintain site productivity and minimize effects on soil erosion and soil properties (structure, soil moisture).

Weather parameters and other data that affect fire behavior shall be monitored and documented in the case file immediately before igniting the prescribed burn. Defer burning anytime prolonged drought, approaching weather fronts and/or high winds create unpredictable fire conditions.

VI. Considerations

To benefit warm season grasses, burn in the spring between April 25 and May 25 when desired species break dormancy. A good rule of thumb is to burn when the desired species has no more than one inch of new growth.

To benefit cool season grasses, burn in the spring before April 15, in July, or after November 15 when cool season grasses are dormant.

To control woody invasion, burn between June 15 and July 20 when fuels are dry enough to carry a fire.

Burn only when a specific management objective is to be met.

Generally, it is not necessary to burn more often than once every 4-5 years. When burning to control undesirable sprouting woody plants, it may be necessary to burn two or more consecutive years. Burning will generally reduce nesting potential for the year burned. Burning frequency will be a weighed decision between the need to improve the grass condition and wildlife production loss for that year.

Cooperators without experience in burning should be advised to seek assistance from persons who have had training or experience in applying the practice.

Cooperators will be cautioned to burn in accordance with state and local laws and regulations. All necessary burning permits must be obtained.

Cooperators must be fully aware that they are liable for any damages caused by fire escaping from their land or caused by smoke blowing into residences, across roads, or airport runways. They may also be liable for fire suppression costs if the fire escapes control.

Incorporate existing barriers to fire such as lakes, streams, wetlands, croplands, and roads into the burn plan.

Have on site the necessary tools, equipment, and personnel to contain the fire to the area planned for the prescribed burn.

When burning near an airport, secure the necessary permission from airport authorities.

Burn only when wind will carry smoke away from roads and occupied residences.

Burning should be managed with consideration for wildlife needs such as nesting, feeding, and cover.

Notify adjoining landowners, local fire departments and public safety officials within the airshed prior to burning.

Consider cultural resources and threatened and endangered plants and animals when planning this practice.

Carbon release should be minimized by managing the timing and intensity of the burn.

Consider the location of utilities such as electric power lines and natural gas pipelines to prevent damage to the utility and avoid personal injury.

Smoke impacts should be considered before the burn and monitored during the burn.

VII. Plans and Specifications

A. A written burn plan will be prepared by certified individuals. Specifications for applying this practice shall be prepared for each site and recorded using approved specification sheets, job sheets, technical notes, and narrative statements in the conservation plan, or other acceptable documentation. All necessary permits must be obtained before implementation of the practice.

B. As a minimum, a burning plan will include:

1. Objective of the burn including a description of vegetation to be burned and the desired results (i.e. change in vegetative type, density, age class, amount of ground litter etc.).

2. Preparation requirements for the burn area including a map locating planned constructed firebreaks, natural firebreaks, location of the test burn, and identification of areas needing special protection.

3. The location and size of firebreaks.

4. Notification requirements prior to igniting the burn.

5. Equipment, manpower needs, and safety requirements.

6. Permits needed.

7. Statement of acceptable conditions for prescribed burn including constraints of temperature, relative humidity, wind direction and speed, time of day, and time of the year.

8. A letter informing the landowner or cooperator that he/she may be liable for damages resulting from the fire and cost of suppression by others, should the fire escape from the designated area.

9. The firing plan. The type of procedure that will be used to accomplish the burn including assessments of the following:

   a. Firelines.

      (1) Use existing fire barriers such as roads, streams, wetlands, and croplands.

      (2) Bare mineral soil is the best firebreak, however mowed green grass in conjunction with a wetline may also be used.

(3) Firebreaks should be a minimum of 12 feet wide when the fuel is grass. The width of the external fireline should be at least 100 feet of burned area on the sides of the burn area that the head fires will be burning towards.

(4) Remove all snags or brush piles near firebreaks to prevent spot fires over firebreaks.

Note: Firelines are used to protect areas from wildfires or as a base line to start the fire from. It is not adequate to contain a prescribed burn.

b. Burn Initiation Conditions

(1) After completion of a successful test burn to insure that the fire will achieve the planned objectives before the main fire is started.

(2) When the wind direction is consistent and the wind velocity is steady and between 5-15 mph.

(3) When the air temperature is 40-70 degrees F.

(4) When the relative humidity is 30-60%. (Caution: relative humidity will drop 50% with a 20 degree rise in temperature).

(5) Early enough in the day to complete the burn before dusk. Avoid midday fires.

Note: Keep abreast of current weather conditions. If the burn cannot meet the above prescription constraints do not burn that day.

c. Firing Technique

(1) Whether to use a head fire or back fire is determined by the objective to be accomplished. A head fire will produce a fast moving fire which carries rapidly over the surface. Head fires are best for control of weeds and brush and removal of excess litter. A backfire is a slow moving, hot fire burning into the wind consuming all combustible materials, except when the mulch layer is wet. Backfires are best for firebreaks.

(2) Establish firebreaks on all downwind sides of the area to be burned by backfiring or other suitable means. To establish backfires, set fire on upwind side of trails, roads, rock ledges, and streams. If no physical barriers exists, wetting the vegetation and setting the fire on the upwind edge of the wetline will accomplish the same purpose. Fire retardant chemicals will make the wetlines more effective.

(3) No head fire will be set until all firebreaks (backfires, etc.) are in place and sufficient to control the head fire.

(4) Patrol fire lines to watch for and extinguish any spotover fires resulting from flying embers.

(5) Make sure all fire is out before leaving the area. Stumps, logs, dead trees, cow chips, etc., can smolder for hours or even days before they are completely consumed. Smoke produced by these types of fuels tends to gather in low areas when wind conditions calm at dusk, this residual smoke combined with fog and darkness can lead to poor visibility on roads near the fire location. Periodic checks of these areas may be necessary for several days.

VIII. Operation and Maintenance

The kinds and expected variability of site factors (e.g., fuel condition and moisture content, weather conditions, human and vehicular traffic that may be impeded by heat or smoke, liability, and safety and health precautions) shall be monitored during the operation of this practice. Sufficient fire suppression equipment and personnel shall be available commensurate with the expected behavior of these

factors during the time of burning to prevent a wildfire or other safety, health or liability incident.

Maintenance shall include monitoring of the burned site and adjacent areas until such time as ash, debris and other consumed material is at pre-burn temperatures.

Complete a post burn evaluation to determine if the objective was accomplished.